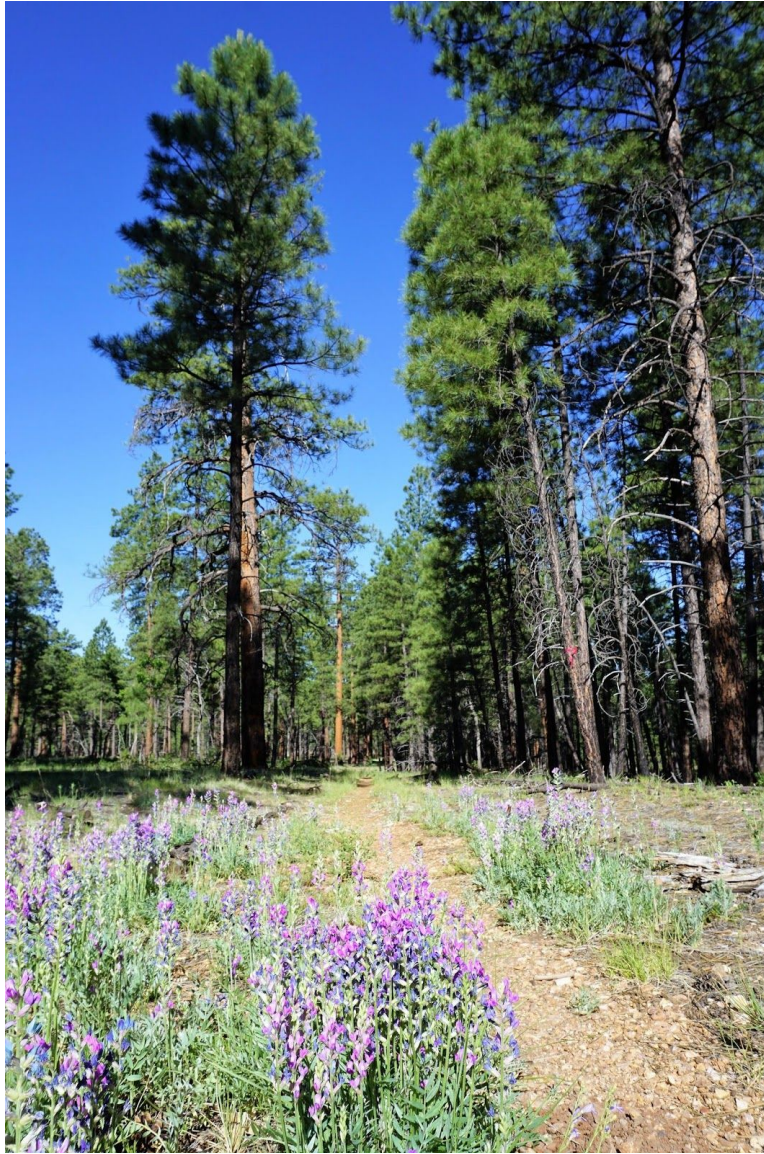


Tusayan Community Trails Master Plan NEPA Proposal



Tusayan Community Trails Master Plan

NEPA Proposal

December 6, 2018

Acknowledgements

This plan has benefitted from the knowledge and insight from the officials and community of the Town of Tusayan and surrounding areas. We would like to especially acknowledge the following:

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Mayor Craig Sanderson
 Vice Mayor Becky Wirth
 Councilor Al Montoya
 Councilor John Schoppmann
 Councilor David Chavez

Eric Duthie, Tusayan Town Manager

Bruce Northern, Tusayan Town Clerk

Private Landowners of Tusayan

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 Kaibab National Forest, Tusayan and Williams Ranger Districts

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Tusayan Trails Community Working Group:
 Romy Murphy, Ted Riley, Kevin Johns

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*The Tusayan Community Trails Master Plan was prepared by Trails Inspire, LLC.
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Tusayan Community Trails Master Plan

Background

On April 16, 2014, the Town of Tusayan adopted its Town Plan for 2024. This plan included a section on community trail development. The goal for trails and open spaces is stated as such: “Complete a trails system that augments the existing trails with new trails linking various areas together, and making it possible to navigate throughout the area by foot or bike in a safe manner”.

Included in the 2024 plan is a map which was produced by Wildan Engineering, showing a system of trails. The trail system was arrived at without proper input from the private landowners, and includes mostly existing motorized dirt and two-track roads marked as trails. Upon examination of this plan, Town Manager Eric Duthie determined that it was best that the process start over from the beginning. At the Tusayan Town Council meeting on April 19, 2017, the Town Manager was approved to award the contract following a bid process. The contract was signed with Trails Inspire, LLC on June 1, 2017.

The development of the 2017 Master Plan was a collaborative effort by private landowners, Town officials, stakeholders, community input, state and federal land management agencies and a community advisory working group.

Regional Context

The Town of Tusayan, incorporated in 2010, is 144 acres. The town’s land is held by private landowners and the Kaibab National Forest. Tusayan is the Gateway Community to the Grand Canyon and the Arizona National Scenic Trail, and the town borders Grand Canyon National Park to the north. The area has old-growth stands of Ponderosa pine and Pinyon-Juniper forest, meadows, and attractive outcroppings of Kaibab Limestone.

The Town of Tusayan is located along Highway 64, two miles from the South Entrance of Grand Canyon National Park. There are four current NPS shuttle bus stops in Tusayan and the Tusayan route runs from March 1 to September 30.

The Town has just under 600 residents by 2016 estimates. Many of the residents are seasonal workers who commute to work by foot. Visitors to Grand Canyon National Park’s South Rim pass through Tusayan on their way in and out of the South Entrance on Highway 64 and often stay in the local hotels. Grand Canyon National Park as a whole received 6 million visitors, and NPS visitor use statistics recorded the traffic count at the South Entrance at 1,493,761 in 2016. Grand Canyon National Park predicts modest growth. In interviews with locals, concierge and tour services, it was reported that tourists are often looking for activities to do in town either before or after their Grand Canyon visit.

Master Plan Objectives

The Master Plan objectives were arrived at through a combination of the town's objectives from the 2024 plan and stakeholder and public feedback during the scoping process.

The Master Plan objectives are as follows:

- Develop a non-motorized multi-use trail system providing safe and sustainable recreational trail routes for visitors and residents
- Identify commuter trail routes for residents
- Highlight the natural beauty of the Tusayan area
- Include opportunities for signage interpreting the natural features of the area
- Provide connectivity with existing trails
- Develop the Grand Canyon History Trail - an interpretive trail telling the story of the human history of the Grand Canyon area.
- Provide the Town of Tusayan, Kaibab National Forest and landowners with a detailed summary of potential trail alignments and construction notes as well as preliminary cost estimates for construction and the National Environmental Policy Act (NEPA) process.

Phase I - Development of Community Trails Master Plan

- Meetings with area stakeholders and private landowners.
- Public meeting and public comment on the plan.
- Survey and assessment of existing trail segments, noting areas of minor or major maintenance and reroutes when necessary.
- Survey, layout and assessment of proposed new trail segments.
- Maps and GPS tracks of the trail system generated based on the survey.
- Trailhead plans, assessment notes and interpretive plans.
- Development of a Master Plan document that will outline construction cost and NEPA estimates.

Phase 1.5 - Public Scoping

- Revision of Master Plan prior to public comment period based on feedback from the Kaibab National Forest and American Conservation Experience.
- Detailed estimate of the project construction costs from American Conservation Experience.
- The Master Plan will be available online for one month and public comment will be available via online form, mail and public meeting.
- Marketing of the public comment period and meeting to outdoors groups and stakeholders.
- Seek feedback from project stakeholders and area landowners.
- Public meeting open house at Town Council Chambers for feedback on the Community Trails Master Plan.
- Production of a Master Plan document that will incorporate changes based on the public feedback period, outline construction and NEPA cost estimates as well as next steps for Phase 2 services.

Phase II - Environmental Analysis and Signage

- Analysis and outreach under the National Environmental Policy Act
- Cultural and natural resource analysis
- Site level adjustments based on resource analysis
- Consultation with Tribal leaders through Kaibab National Forest Liaison
- Signage and interpretation plan
- Trail construction and development agreements with Kaibab National Forest and private landowners

Phase III - Construction

- Trail construction bidding process
- Trail construction
- Signage installation
- Volunteer recruitment including establishing segment stewardship system to ensure regular assessment and maintenance
- Marketing Plan

Project Timeline

April 2014

- On April 16, 2014, the Tusayan Town Council approved Resolution No. 2014-04, thereby adopting the Tusayan General Plan 2024.
- Included in the General Plan was a trails plan with two maps from Wildan Engineering showing a network of trails that were shared-use with motorized travel and located on local and forest service roads.

April 2017

- A bid process for the Tusayan Trails project was announced with a deadline of April 18th.
- Trails Inspire, LLC submitted a bid to the Town of Tusayan on April 12.
- At the Town Council meeting on April 19th, Town Manager Eric Duthie was approved to award the contract following a bid process.

June 2017

- June 1st - a contract between the Town of Tusayan and Trails Inspire, LLC was signed for Phase I of the Tusayan Trails Plan.

Preliminary scoping visit to Tusayan June 20th - 25th:

- In-person and phone interviews with stakeholders - Private Landowners, Business Owners, Kaibab National Forest, Grand Canyon National Park, members of the Arizona Trail Association
- Interviews with local Chamber of Commerce, tour and concierge services
- Interviews with local trail enthusiasts
- Presentation to Grand Canyon Rotary Club
- Presentation to Grand Canyon Wellness Committee
- Tour of area from Fire Chief Greg Brush and former Mayor John Rueter

July 2017

Public Input Trail Questionnaire:

The questionnaire was available online two weeks before the public meeting. It was sent to a mailing list of approximately 140 people and organizations, and local business owners were encouraged to print out and distribute surveys to their employees. 38 completed responses were returned. Results of the questionnaire are attached as **Exhibit I**.

The questionnaire, filled out 76% by residents and 24% by visitors, found that people learned about the current trails in Tusayan via word of mouth or internet/social media. Trail use was reported in all four seasons, but less so in winter.

The preferred type of tread found in the survey as well as the exercise done at the public meeting is singletrack - wide enough for one trail user and constructed out of natural materials. Second most popular was a natural surface wide enough for two people. These preferences were taken into consideration when designing the Master Plan.

The top goals for a design for a Tusayan trail system were to build trails that provide convenient recreational opportunities and trails for recreation for residents.

The top three activities that were listed in the questionnaire were hiking, mountain biking, and photography/exercise stations.

Stakeholders and Public Meeting Invitations and Promotion

Stakeholders meeting invitations were sent to 84 individuals and organizations. Public meeting invitations were emailed to approximately 140 individuals and organizations and public meeting flyers distributed to local businesses and interested groups. Promotion was also done through social media, the Trails Inspire blog and the Grand Canyon News.

August 2017

Stakeholders Meeting - August 1st: A stakeholders meeting took place at Grand Canyon National Park and 17 people attended. A summary of the project's objectives was presented followed by a roundtable discussion. Meeting notes are attached as **Exhibit II**.

Public Meeting - August 3rd: Held at Town of Tusayan Council Chambers from 6-8 pm. A presentation was given about the project and survey results. The public was invited to comment and fill out surveys as well as participate in a map exercise to determine where they would like to see trails in the Tusayan area. The presentation, which includes methods and survey results, can be found here: <http://bit.ly/2vMh6tA>. The full list of public comments are attached as **Exhibit III**.

"I think it's a great idea! Tusayan needs more recreation opportunities"

"A trail system that can cater to a variety of activities, link housing to job sites, and give people access to the surrounding forest is ideal."

“I'd place a high value on developing trails that can be ridden on mountain bikes within this system as there really are not many opportunities to safely ride in this area. I am not in favor of single use trails or trails that discourage one form of recreation in favor of another.”

September 2017

Trail Scouting and Survey

Survey of potential trail alignments, trailheads and signage with Mark Flint from Southwest Trail Solutions from September 5th - 9th. Sustainable trail design principles were rigorously followed, and exceeded in most cases. The TopoFusion program was used to map and provide data on each of the trail segments. Descriptions of individual trail segments and construction notes are included on page 13.

Meetings took place with Kaibab National Forest District Ranger Kendall Cikanek, private landowners, Jan Balsom at Grand Canyon National Park, Roger Clark from Grand Canyon Trust and Alicyn Gitlin from the Sierra Club. The Town of Tusayan received a letter of support for their trails plan from the Coconino County Public Health Services District.

Tusayan Trails Master Plan

The Master Plan was written in September and October, using Forest Service and Grand Canyon National Park documents on land and resource management, trail design specifications and transportation management plans.

October 2017

The Master Plan was submitted to the town of Tusayan on October 9th, 2017. The Sierra Club, Grand Canyon National Park, Grand Canyon Trust, Grand Canyon Wildlands Council, International Mountain Biking Association of America and private landowners were given a preview of the maps and document for comment.

The Town of Tusayan voted a unanimous yes toward approval of the Master Plan. It was decided that the Master Plan would benefit from additional public scoping.

January 2018 - Phase 1.5

Trails Inspire was contracted in January 2018 for Phase 1.5 to open the Master Plan for public comment for one month and hold a public meeting for stakeholders, landowners, recreational groups and other concerned citizens.

March- June 2018

Public comment on the Master Plan open starting March 21st and ending April 21st. The comment period was extended until May 7th. Comments were submitted online, via email or traditional mail. An open-house style public meeting took place on March 28th at Tusayan Town Hall. A list of the comments submitted is available in the appendix as **Exhibit IV**. The revised Master Plan was approved to go on to Phase 2 by the Town Council on June 13, 2018.

September 2018 - Phase 2

The Phase 2 contract was signed with Trails Inspire on September 6th, 2018. The Kaibab National Forest was sent an initial NEPA proposal on September 12th.

October 2018 - A Stakeholders Meeting was scheduled for December 4th, 2018.

November 2018 - Stakeholders meeting invite sent. Adjustments made to NEPA proposal based on Forest Service recommendations.

December 2018

A stakeholders meeting took place on December 4th from 3-5 pm. Project Director Sirena Rana Dufault gave a presentation on the current state of the Tusayan Trails Plan. Sue Farley, NEPA coordinator from the Kaibab National Forest, listed next steps for the project and answered questions. Four people in attendance.

Formal request for partnership on the Tusayan Community Trails System was mailed by the Town of Tusayan to the Kaibab National Forest on December 5th.

GPS tracks for all trail segments and trailheads and an updated Master Plan were sent to the Kaibab National Forest for approval on December 6th.

Tusayan Trails Master Plan Overview Map

For detailed descriptions of trails on the Tusayan overview map on page 9, see pages 13-15. Map shows only new proposed trails.

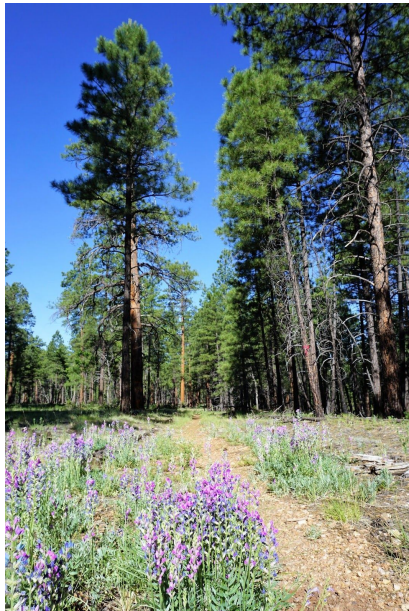
- Big Loop: 7.2 miles - Singletrack natural surface trail- Forest Service
- Short Loop: 4.5 miles - Singletrack natural surface trail - Forest Service
- Ten X Ranch Connector: 0.5 miles - 4' wide gravel trail - Private Land/Forest Service
- Loops to FR 302: 0.3 miles - Singletrack natural surface trail - Forest Service
- New trailhead facilities for 40 cars at FR 302 - Forest Service
- New trailhead facilities for 15 cars at FR 302/303 junction - Forest Service

Tusayan Trails Master Plan Town Map

For detailed descriptions of trails on the Tusayan town map on page 10, see pages 15-17. Map shows only new proposed trails.

- Grand Canyon History Trail: 0.8 miles - 5' wide gravel path (ADA) - Forest Service
- Greenway Link Trail: 0.6 mi. - 4' wide gravel path - Private Land/Forest Service
- Housing to Sports Complex: 0.2 mi. - 4' wide gravel path - Private Land
- Airport Trail: 0.3 mi. - 4' wide gravel path - Forest Service

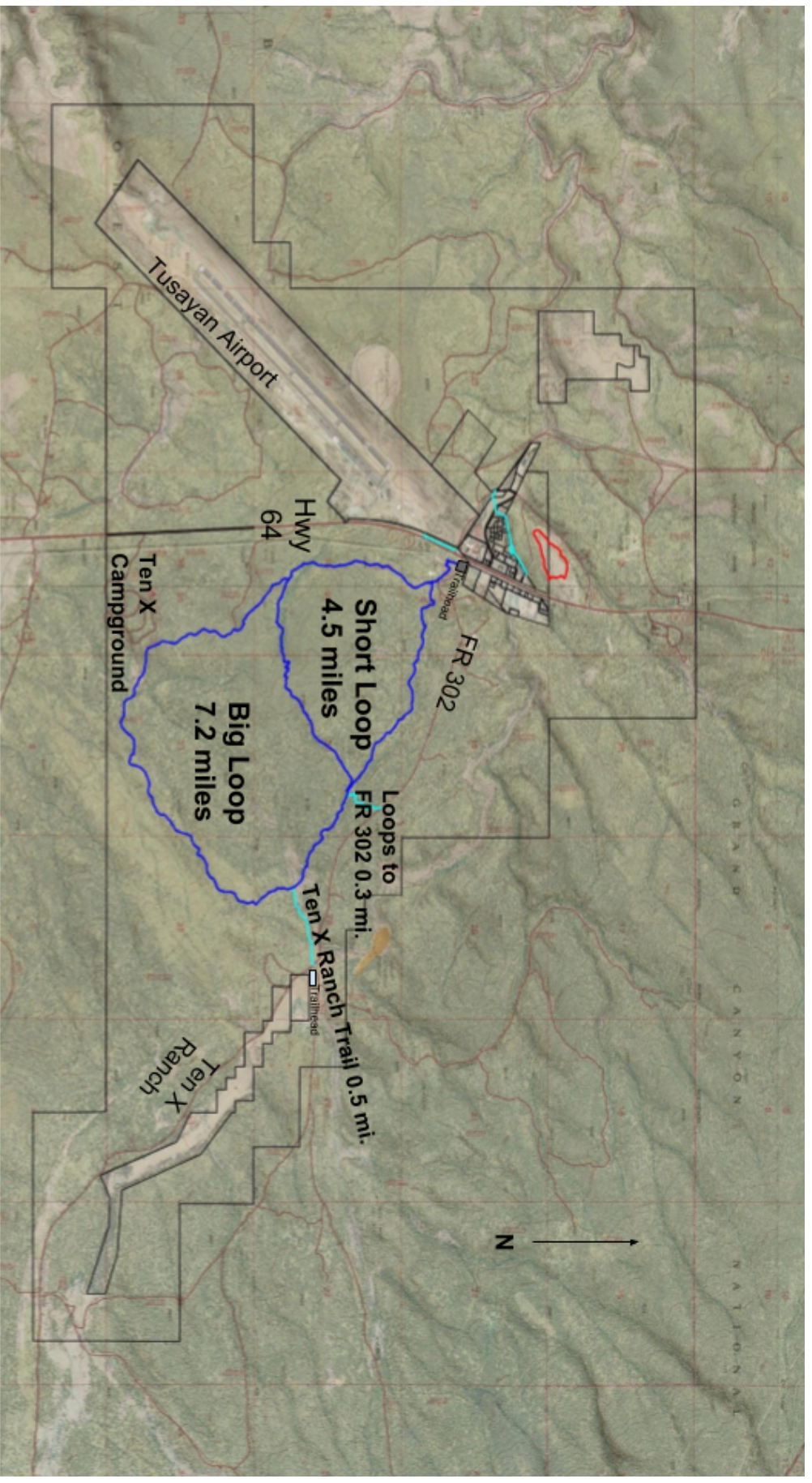
Trail Tread Examples



Singletrack trail, natural surface



Crushed Gravel Trail (ADA accessible)



Tusayan Trails Master Plan - Black delineates town boundary and private parcels

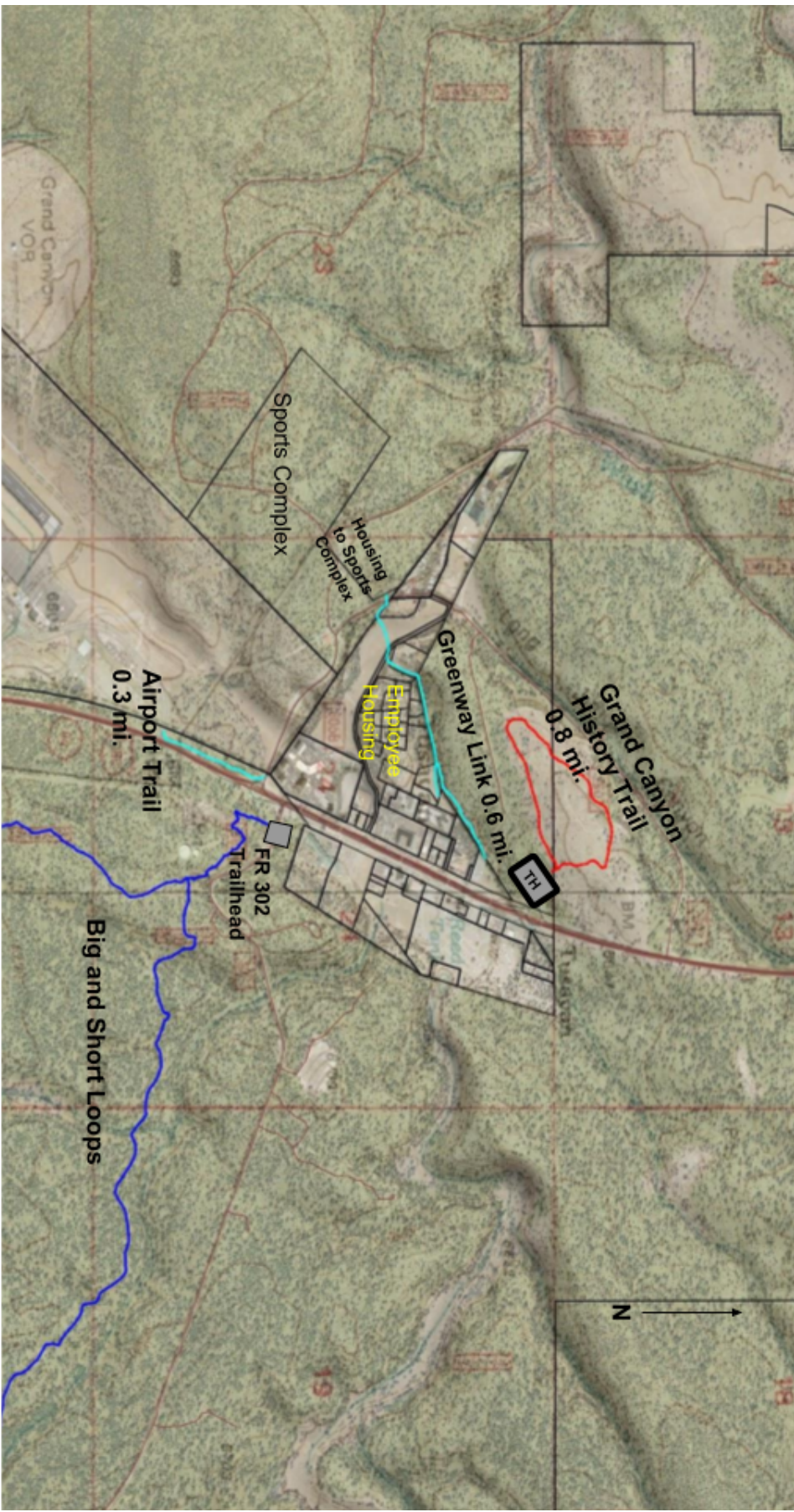
Connector Trails

Big and Short Loop Trails

Grand Canyon History Trail

Forest Service Roads

1 Mile = [line segment]



Tusayan Trails Master Plan Legend - black lines delineate private parcels

- Connector Trails
 - Grand Canyon History Trail
 - Loop Trails
 - Forest Service Roads
- 1 mile =

Forest Service Management Objectives and Principles

The following Forest Service desired conditions for recreation and scenery were taken into consideration from *Land and Resource Management Plan for the Kaibab National Forest*.

- A wide spectrum of high-quality recreation settings exists. Users have access to a variety of developed and dispersed opportunities.
- The Kaibab NF provides sustainable recreation consistent with public demand. Use levels are compatible with other resource values.
- Conservation education actively engages children and adults, resulting in increased forest stewardship, ecological awareness, partnerships, and volunteerism. Information and educational programs provide opportunities to connect youth, low-income, and minority populations with nature.
- Visitors have access to information that enriches their recreation experiences and contributes to an understanding of their role in public land stewardship. “Leave No Trace,” “Tread Lightly,” fire prevention, wildlife awareness (e.g. lead reduction, Be Bear Aware, Animal Inn, etc.), and archaeological resource protection principles are promoted and practiced by the visiting public.
- Recreation management activities complement and support local economies and tourism.
- User conflicts are infrequent.
- Any new motorized trailheads should be located in front-country areas, incorporate or convert existing roads, protect open space, and protect natural and cultural resources.

Sustainable Design Principles

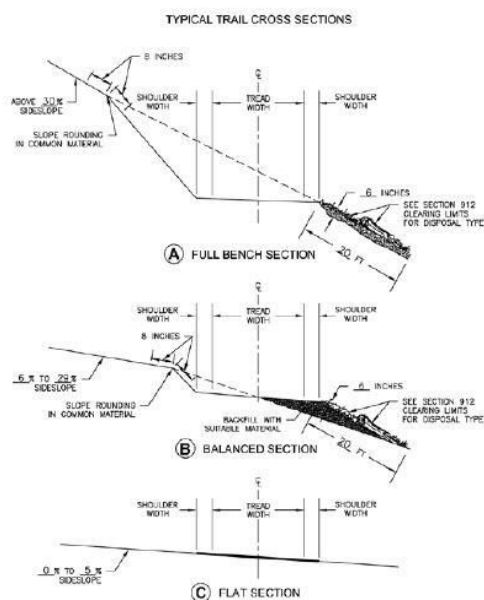
Sustainable trail design principles were rigorously followed, and exceeded in most cases. Assuming the use of sustainable construction techniques, these trails will be free of any significant erosion impacts from normal use and weather patterns. As a result, maintenance will be mostly a matter of monitoring/cleaning drainage structures, de-berming and cutting back vegetation. This work can be accomplished by volunteers, minimizing operations and maintenance costs.

General principles of sustainable trail design from *USDA Forest Service Trail Construction and Maintenance Handbook*:

- Sustainable grades less than 10%
- The half rule: the trail grade should be no more than half the sideslope grade
- Outsloped tread
- Frequent grade reversals
- Erosion resistance
- Path that traverses along the sideslope
- Provision for sheet flow of water runoff
- Positive user experiences
- Low maintenance

Forest Service Trail Design Specifications

Examples of Forest Service trail design specifications from the *US Forest Service Standard Trail Plans and Specifications Step by Step Guide* :



These are the documents that were used as resource materials in the planning process:

Standard Specifications for Construction of Trails and Trail Bridges on Forest Service Projects

US Forest Service Standard Trail Plans and Specifications Step by Step Guide

USDA Forest Service Trail Construction and Maintenance Handbook

Land and Resource Management Plan for the Kaibab National Forest

South Rim Visitor Transportation Plan

Foundation Document Grand Canyon National Park

Desert Design: Building Trails in a Harsh and Demanding Environment, Mark Flint and Arizona State Parks

Tusayan Trail Proposed Segment Descriptions and Construction Notes

Long Loop Trail

Distance: 7.21 Miles

Uses: Hiking, running, mountain bicycling, bird watching, equestrian, X-C skiing, snowshoeing

Difficulty: Gentle grades, average grade less than 5%. Maximum grade 11% (30'). Generally non-technical with a few short rocky sections.

Description

The Long Loop Trail is a “lollipop” loop, with an out-and-back 1/3-mile “stem” from a potential trailhead site at the northeast corner of the junction of FR 302 and SR 64. This trail provides an opportunity for multi-modal recreation where both visitors and locals can enjoy old growth Ponderosa Pine forest, meadows, rock formations, wildflowers and wildlife. The trail winds through Ponderosa pine and pinyon-juniper forest and at the easternmost end arcs through a large alpine meadow, which affords views of Red Butte to the southeast.

The western edge of the Long Loop Trail will provide a 2.5-mile link from the Ten-X Campground to Tusayan, and passes through some dense vegetation, including manzanita brush, juniper and piñon pine, about a half-mile north of the campground. There are currently plans in place to expand the size of the campground and the trail will be routed to accommodate that expansion. There is a second 0.32 mile proposed connector linking the trail from the Short Loop Trail intersection north to FR 302 where it intersects with FR 8048 (campsite access). The eastern end of the loop has a 0.47 mile connector trail to the Ten X property where FR 302 and FR303 intersect. A trailhead will be located south of the junction of FR 302 and FR 303 with 15 parking spaces.

The Long and Short Loops can be combined in a figure-8 pattern for a distance of 10.59 miles.

Construction and Maintenance

This trail is proposed as a natural surface path with a constructed tread 3 feet in width. Active tread will most likely be 14-18 inches wide. The trail will have no significant construction challenges, and bench cutting will be minimal. Native rock for drainage management structures/crib walls is plentiful. Covering the tread with a 1/2”- rock base (similar to the Nature Trail at the 10-X campground) would make it suitable for three season use. The connector trail to the Ten X property will be a crushed gravel path with a constructed tread 4 feet in width, with the active tread most likely the full width. It will provide Ten X residents with a short trail for recreation as well as a connector to the large and small loops.



Meadow and Ponderosa Pines on the Long Loop Trail

Short Loop Trail

Distance: 4.53 Miles (includes 2.96 miles of the Long Loop Trail). The southern portion of the Short Loop is 1.57 miles.

Uses: Hiking, running, mountain bicycling, bird watching, equestrian, X-C skiing, snowshoeing

Difficulty: This trail has a sustained gentle climb of approximately 0.7 miles, with several level sections interspersed to provide a measure of relief. Average grade for the trail is 4%. The trail is generally non-technical with a few short rocky sections.

Description

This trail provides an opportunity for multi-modal recreation where both visitors and locals can enjoy the Ponderosa Pine forest, meadows, wildflowers and wildlife. When this trail was surveyed in September, elk were heard bugling and this would be a great experience for visitors and locals alike. This trail bisects the Long Loop Trail, providing a shorter version with similar characteristics. It can be accessed via a 0.32 mile proposed connector trail from the Long Loop Trail junction on the north side to FR 302 where it intersects with FR 8048 (campsite access). The trail passes through some dense vegetation, including manzanita brush, juniper and piñon pine, on either side of the summit.

Construction and Maintenance

Construction and maintenance specs for this trail are the same as for the Long Loop Trail.

Grand Canyon History Trail

Distance: 0.81 Miles

Uses: Interpretation, hiking, running, mountain bicycling, bird watching, dog walking, equestrian, X-C skiing, snowshoeing

Difficulty: Gentle grades, average grade less than 5%. Non-technical.

Description

The Grand Canyon History Trail is an interpretive loop that starts and ends at the Tusayan Greenway Trailhead. The purpose of the trail is to tell the story of human history of the Grand Canyon and Tusayan from Native American times to the present. The trail winds through Ponderosa pine and pinyon-juniper forest and open areas of sagebrush. Other aesthetic features include areas of exposed limestone and the trail is routed to minimize sightlines into town and the dispersed camping on Long Jim Loop Road.

This area is highly impacted by social trails, dispersed campsites, and trash. A well-marked interpretive trail that is used by visitors and residents plus revegetation of old roads/cleared areas will help mitigate the current damage done to the resource, and discourage future resource damage.

Construction and Maintenance

This trail is proposed as a gravel path with a constructed tread 5 feet in width, in accordance with ADA standards. Active tread will most likely be the full width. The trail will have no significant construction challenges, and bench cutting will be minimal. Native rock for drainage management structures/crib walls is plentiful. Covering the tread with a ½" - rock base (similar to the Nature Trail at the 10-X campground) would make it suitable for three season use.

The construction plan includes revegetation on approximately 2,000 feet of old roads/cleared areas on the interior of the loop. The revegetation can be done in conjunction with a cleanup event to pick up the trash.

A committee will be developed as part of Phase 2 to determine an interpretive signage plan.

Ten X Ranch Trail

Distance: 0.47 Miles

Uses: Hiking, running, mountain bicycling, bird watching, equestrian, X-C skiing, snowshoeing, interpretation

Difficulty: This trail has a grade of less than 5%. The trail is non-technical.

Description:

This trail connects the Ten X Ranch Property to the Big and Small Loop near the junction of FR 302 and FR 303. A portion of the trail is next to an abandoned logging railbed. The trail winds through Ponderosa pines and pinyon-juniper forest. This trail will provide the residents of the Ten X Ranch with a place for dog walking, multi-modal recreation and nature study.

Construction and Maintenance

This trail is proposed as a gravel path with a constructed tread 4 feet in width. Active tread will most likely be the full width. The trail will have no significant construction challenges. There is an opportunity for interpretive signage telling the history of the railroad bed. Native rock for drainage management structures/crib walls is plentiful. Covering the tread with a ½"- rock base (similar to the Nature Trail at the 10-X campground) would make it suitable for three season use.

Greenway Connector Trail

Distance: 0.57 Miles

Uses: Hiking, running, mountain bicycling, bird watching, walking to work, snowshoeing

Difficulty: This trail has a grade of less than 1%. The trail is non-technical.

Description

This trail connects the main residential area to the Tusayan Greenway Trail in the parking lot behind the IMAX Theater. The current path is a 4-ft. wide tread covered in wood chips and accesses the back of the Canyon Plaza Hotel parking lot. It is used by workers of the businesses in Tusayan for getting to and from their residences and goes past residences of the Canyon Plaza landowners. Vegetation is Ponderosa Pine forest. The eastern portion of this trail is on Forest Service land and the western part is on private land owned by A & F Apartments, LLC.

Construction and Maintenance

This trail is proposed as a gravel path with a constructed tread 4 feet in width. Active tread will most likely be the full width. The trail will have no significant construction challenges.

Sports Complex to Housing Trail

Distance: .22 Miles

Uses: Hiking, running, bird watching, walking to work

Difficulty: This trail has an overall grade of less than 5% with short stretches of up to 11%.

Description:

This trail connects the housing area to the Sports Complex. The trail goes through a meadow from RP Drive to the base of the housing, then ascends the slope via steps to access the apartment complex. The trail stops at Long Jim Loop road and a paved path that continues on the other side will be built by the town adjacent to the road into the Sports Complex. Vegetation is Ponderosa pines, oak and pinyon-juniper. This trail is on private land owned by the Thurston Trust.

Construction and Maintenance

This trail is proposed as a gravel path with a constructed tread 4 feet in width. Active tread will most likely be the full width. The trail will have no significant construction challenges. Native rock for drainage management structures/crib walls/steps is plentiful. Covering the tread with a ½”- rock base (similar to the Nature Trail at the 10-X campground) would make it suitable for three season use.

Airport Trail

Distance: 0.24 Miles

Uses: Hiking, running, mountain bicycling, walking to work

Difficulty: This trail has a grade of less than 5%. The trail is non-technical.

Description

This trail connects the end of the sidewalk at the southern roundabout with the Tusayan Airport. There is an existing gravel path that is 18-24” wide that is used by tourists, pilots and locals. The trail goes through Ponderosa pines.

Construction and Maintenance

This trail is proposed as a gravel path with a constructed tread 4 feet in width. Active tread will most likely be the full width. The trail will have no significant construction challenges. Native rock for drainage management structures/crib walls is plentiful. Covering the tread with a ½”- rock base (similar to the Nature Trail at the 10-X campground) would make it suitable for three season use.

Other Amenities

Telescope Viewing Area and Platform - Grand Canyon National Park was awarded International Dark Sky Park designation in 2016 and the skies around Tusayan are perfect for stargazing and astronomy. The Town will work with astronomers and the Kaibab National Forest to determine the best location for this activity.

Trail Construction Estimates

A list of proposed trails and description of trail features was given to Matt Roberts at American Conservation Experience. Their preliminary estimate for the trail construction costs is as follows, based on 2018 prices:

Tusayan Trail System Estimate

	per ft	miles	ft	Total cost
Single track trails				
Long Loop	\$ 2.25	7.21	38069	\$ 85,654.80
Short Loop	\$ 2.25	1.57	8290	\$ 18,651.60
Loops to FS 302	\$ 2.25	0.32	1690	\$ 3,801.60
Design and Layout time (2 people for 2 weeks)				\$ 9,600.00
4 ft Gravel Trails				
Airport Trail	\$ 8.00	0.25	1320	\$ 10,560.00
Greenway Link	\$ 8.00	0.6	3168	\$ 25,344.00
Housing to Sports Complex	\$ 8.00	0.22	1162	\$ 9,292.80
Ten X Ranch Connector	\$ 8.00	0.47	2482	\$ 19,852.80
Design and Layout time (2 people for 1 weeks)				\$ 4,800.00
5ft ADA				
Grand Canyon History Trail	\$ 9.50	0.81	4277	\$ 40,629.60
Design and Layout time (2 people for 1 weeks)				\$ 4,800.00
Subtotal for all trails				\$ 232,987.20
Contingency 10%				\$ 23,298.72
TOTAL FOR ALL TRAILS				\$ 256,285.92

National Environmental Policy Act (NEPA) estimate

The Town of Tusayan is proposing the construction of a non-motorized multi-use trail system located on private lands and Kaibab National Forest (KNF) lands surrounding the community of Tusayan. As identified in the 2018 Tusayan Community Trails Master Plan, approximately 8.8 miles of singletrack natural surface trails and 1.8 miles of 4-foot wide crushed gravel trails, and 0.8 miles of 5-foot wide ADA accessible trails are proposed. As the proposed project is located on National Forest lands and approval requires issuance of Forest Service authorizations, the project is considered a Federal undertaking requiring compliance with the National Environmental Policy Act (NEPA). SWCA prepared a cost estimate for completing the NEPA

process, as described below. This cost is based upon general information and will require refinement through communication and input from the KNF District Ranger and resource staff.

The initial step in the NEPA process includes cultural and biological resource surveys and analyses of the proposed trail alignment. The surveys will analyze botanical, wildlife, viewshed, watershed and cultural resources. The surveys will include site level adjustments to avoid sensitive biological areas and designated cultural properties.

It is SWCA's understanding that the appropriate level of NEPA documentation for the proposed trail construction is a Categorical Exclusion under the Forest Service NEPA provisions 36 CFR 220.6(e)(1) *Construction and reconstruction of trails*. This categorical exclusion is appropriate if there are no extraordinary circumstances that would warrant further analysis and documentation in an Environmental Assessment or Environmental Impact Statement. The categorical exclusion would be documented in a Forest Service Decision Memo. It is not anticipated that the project would require public scoping or comment.

SWCA will prepare a draft Decision Memo following the guidance of the Kaibab National Forest (Forest Service) and provide this to the KNF for review. Resource impact assessments will be conducted only for biological and cultural resources as described below. The USFS Deciding Official will determine if the project would require a public scoping meeting after reviewing the scoping efforts already conducted by the town. The draft Decision Memo will be revised once by SWCA based on Forest Service review. Upon completion of the final Decision Memo, SWCA will provide the Forest Service with all administrative record documentation developed or collected by SWCA during the NEPA process.

Should significant impact on cultural or biological resources be discovered during the survey, the trail alignment would be rerouted to avoid necessity of mitigation. Consultation with Tribes and the State Historic Preservation Office would be necessary and completed by Kaibab NF.

Costs below include biological, cultural, wildlife, watershed, soil and viewshed surveys and are reflective of an November 2018 estimate that is valid for 90 days.

Task	Labor	Expenses	Task Cost
NEPA	\$11,480	\$125	\$11,606
Cultural Evaluation	\$7,068	\$757	\$7,843
Biological Evaluation	\$8,846	\$431	\$9,277
Total			\$28,726

Recommendations

The Town will work with the community, the private landowners and the Kaibab National Forest to prioritize the planning of the individual trail segments during Phase 2 of the project. The final decision rests with the Kaibab National Forest, and the plan must fit within their planning and management objectives. Preliminary assessment short of actual surveys indicate a very low likelihood of significant cultural and environmental impacts.

Exhibits and Appendices

Exhibit I: Public Scoping Questionnaire Results

Public Scoping Questionnaire results can be found at <http://bit.ly/2vMh6tA>

Exhibit II: Scoping Public Comments

A community scoping questionnaire and public comment period was open for two weeks, ending August 1st. Comments were also submitted at the Public Meeting on August 3rd.

-I love the current greenway to and from the Park. There is already plenty of infrastructure with all the forest roads...it's just a simple matter of connecting dots! Let's get folks out there! Our State is AMAZING!

-Yes! Do a good job of distributing maps (making them readily available online); the current paths have no presence online. Make the path clearly marked.

-I think it's a great idea, I would specifically encourage trails that make connectors to the Arizona Trail, and trails for kids, beginners and families as there are literally millions of visitors going through the town each year.

-I think a community trail system around Tusayan would be a wonderful addition to the community. I'd place a high value on developing trails that can be ridden on mountain bikes within this system as there really are not many opportunities to safely ride in this area. I am not in favor of single use trails or trails that discourage one form of recreation in favor of another. I believe we can all share. Additionally, I think one of the biggest challenges for this project will be creating safe crossings on AZ-64. Currently traffic often blows through crossings and it often feels like a live game of Frogger crossing the street.

-Ample parking and a connection to the AZT. I would also love to stop for a session on a skills park or pump track when in the area.

-Excited about the trails. Having good trailheads and parking.

-A liveable community for residents should be a first priority... commuting, recreation, connectivity throughout the community.

-Trails are important to all communities, and the addition of trails in and around Tusayan could have wonderful benefits for locals as well as helping to harness the economic power of Grand Canyon nearby. Trail recreation near Tusayan could be big business.

-I think it's a great idea! Tusayan needs more recreation opportunities

-Trail systems are a low cost, high value amenity that improve quality of life and generate community pride. Tusayan is surrounded by beautiful public lands that could be providing more benefits and services for local residents. Could be an excellent compliment to what's available in Grand Canyon National Park for visitors from around the US and abroad, making their experience more full and rich. It would also encourage longer stays from a more diverse pool of visitors (those with kids, etc). As an Arizona resident, I support this project.

-I love the idea of a community trail system. Ease of use is a major factor in the system's success. Making information on their location, mileage, connections, ideal uses, etc. easy to access would be a key component in ease of use. Knowing where the trails are, where they lead, how long and the use/difficulty would also allow for appropriate trail use reducing safety concerns or response. Making a trail system accessible from multiple locations and providing connectivity between main corridors would make the system convenient.

-I would love to be able to road bike and Roller skate on the trails. It would be nice to have some mtb options as well. I am most interested in exercise stations and a surface I can roller skate on

-As a visitor to Tusayan I never dreamed there were any trails near Tusayan so I am very glad to hear there is planning for a trail near or around Tusayan. To me Tusayan has been only a place for burgers and gas. I am excited to know Tusayan is planning to develop a trail that would give me as a visitor a unique experience and a reason to stay in the town. It sounds like a win/win for everyone. It would be great to walk or ride a trail with signage about the area. If connecting to the AZT is possible that would be super. Access and parking will be important to those of us with horse trailers or RV's. I hope the trail is built and built as a trail for all level of users. I know it would enhance my visit to Tusayan!

-Tusayan has so much walking traffic. I support a system that makes it safer for locals and tourists.

-Could be good for the community but feel many other things should be done that are more important.

-Make the community more aware of where the trails are. Website/maps/signs/etc.
great idea . making trails where employees can get from point a to b without having to cut across private property low lighting so they can be used at night.

-A community trail system would be a wonderful addition to Tusayan, giving our visitors an expanded understanding of the Plateau. Improved signage along the trail (esp intersections), would help visitors that are not familiar with hiking or reading maps, confidently enter the forest, hike and leave with great recommendations for their friends and families to come Experience Tusayan when visiting the Grand Canyon.

-A trail system that can cater to a variety of activities, link housing to job sites, and give people access to the surrounding forest is ideal.

-Connect them to NPS shuttle bus stops & Tusayan convenience

- I think this is a good idea so people can use the trails without any worries about safety.
- Solar lighting, periodically and cookie dispensers for free cookies

-It is a good idea for locals that live here to have something to do as well as the tourists

-Excellent idea. The more trails that are open to all users (especially beginners) is very important.

-Maps at the trailhead

-The balance of wilderness and responsible recreation is a concern that must be observed. The volume of visitors to GCNP poses possible terrible impact, if we over develop, if we move in an inappropriate direction, we will be nothing but another Central Park and have lost the primal joy around us.

--I think this is a great idea. I think the community needs to promote multimodal transportation and recreation opportunities for visitors and residents whenever possible. Good to tie into shuttle bus stops.

-Replace forest service roads with trails. More trails equal less animals due to too many humans, plus more trash that animals eat (too many animals have trash in them). Asphalt leaches poison into soil from rain washing it in. Most concrete sucks in oxygen and releases CO₂ constantly. I agree we need to funnel people instead of having a spiderweb of trails. If forest service roads were shut down to visitor vehicles but open to hikers it would keep down the dust and improve the air quality. I work in wildlife rehabilitation, too many injured animals are filled with trash though they came to us being illegally shot, hit by a car, electrocuted, etc. Areas where residents and visitors create a spiderweb of social trails should have one singletrack to replace them. We have fragile cryptobiotic soil including mosses and lichen that take too long to come back and heal the soil. If dogs are allowed provide stations to throw away their poop, it pollutes our environment including water, creating diseases.

Exhibit III: Stakeholder Meeting Notes

Tusayan Trails Stakeholders' Meeting
Sirena Dufault, Facilitator
August 1, 2017, 12:00 pm – 2:00 pm
Science and Resource Management Conference Room
Grand Canyon National Park
Meeting Notes

- **Introductions**

84 invitations were sent to area stakeholders.

Each of the 17 participants shared their name, organization, and title:

NAME	ORGANIZATION	TITLE
Dan Gunn	USFS	Acting Rec Director
Liz Schuppert	USFS Kaibab NF	Public Service Staff Officer
Jan Balsom	NPS – GC	Senior Advisor
Deirdre Hanners	Grand Canyon	Rec pm
Mike Kearsley	Grand Canyon NP	Biologist
Tim Stine	Town of Tusayan	Maintenance
Susan Kerley	Town of Tusayan	Interim Town Clerk
Eric Duthie	Town of Tusayan	Town Manager
Kris Menger	NPS Commercial Services	ASA
Steve McClain	Bright Angel Bicycles	GM
Nora Berry	Xanterra	Dir of Trans
Lori Rommel	Grand Canyon School	Asst Principal
Kendall Cikanek	USFS	Deputy Director
Andrew Aldaz	Red Feather Lodge	
Julie Aldaz	Red Feather Lodge	GM
Ted Riley	Pink Jeep	Head Guide
Kyle Gifford	Pink Jeep	Supervisor

- **Project Summary and Objectives**

Sirena Dufault itemized these points:

Safe and Sustainable Trails

Non-motorized, multi-use trails

ID commuter trails for residents

ID areas of natural beauty to highlight

AZ Trail – a big priority is to re-design a single-track experience for thru hikers and section hikers

Interpretative signage will highlight the last piece – the Grand Canyon History Trail that tells the history of people of the Grand Canyon and takes you out and back into town

- **Roundtable Discussion and Questions**

Eric Duthie: In 2014, Tusayan completed its General Plan which includes a map of trails. No one bothered to find out who owned the property on which the trails were located. Now, the Town is starting from scratch. We want to tie the trails at Tusayan businesses to larger, longer trails to develop opportunities for locals and tourists.

Speaker representing Transportation portion of office since Manager, Pam, could not attend meeting: Greenway or paved? We are highly interested in trails from shuttle bus stops, considering current stops or new ones.

Sirena Dufault: This is an important piece of the puzzle. The flow is very important. We would be interested in knowing the proposed future stops.

Deirdre Hanners: Would there be information kiosks?

Sirena Dufault: Marking and signage is important. In talking with the designer of the AZ Trail app, I learned it is easy to set up trail narratives in different languages. Also, a brochure could be printed for distribution that would integrate information from various sources in one place. We would need informational pieces for the gateway commuter.

Steve McClain: One concern is bikes. A trail or loop (4-5 miles) in Town for family bike riding would be ideal. A paved trail system within the boundaries of town would work for bike riders.

Nora Berry: Where does the paved trail end?

Sirena Dufault: At the parking lot.

Lori Rommel: From the School's standpoint or curriculum, this presents all kinds of opportunities.

Sirena Dufault: From interviews with school children in June they said there's no easy way to get to Town Hall for Computer Labs on Fridays. There is no continuous trail. It goes to the Airport and ends.

Kendall Cikanek: ADOT has rules and regulations for school zones to consider. He wants to help provide high-quality, safe experiences for those using the AZ Trail. He is interested in how we can facilitate that and in traffic flow. He explained that there are two aspects of sustainability: financial and maintenance.

Dan Gunn: How far in the future are we looking?

Eric Duthie: There are some limitations on what we can do to expand horizontally. Expansion of any economic opportunity in town is limited by land, land usage, and restrictions on land usage.

Eric Duthie: The majority of town is Forest Service land. The intent would be the 80 acres dedicated to the School. The Town is involved in building infrastructure for the Town and School. One idea for guests to get around town supports bike loops with a focus on Hotel Row. Joining the AZ Trail at IMAX and focusing on what can be done within Town Limits that would keep guests off highways and provide a place for them to exercise leisurely is our goal.

Kendall Cikanek: The Forest Service is hesitant to build infrastructure. Strict processes are guiding them. Where there are a lot of visitors, they are getting the message they are needing to partner. They recognize that visitation to Grand Canyon National Park is growing. Their focus is on transparency, sustainability, and partnerships and not in biting off more than can be handled.

Liz Schuppert: The FS cannot maintain what it has now. It makes sense for a trail from campgrounds to bus stops.

Jan Balsom: A compatible system is needed by design, not by accident. Recognizing the capacity for what Tusayan and the Park can accommodate is important. How do we want visitors to experience Tusayan? The two important elements are education and sustainability.

Steve McClain: Are there five or six gatekeepers. One is missing from our meeting – the corporation what owns 10X Ranch. You need to create a plan, present it to the gatekeepers, then come back to decide what can be done as a group – what is actually possible.

Sirena Dufault: Where we would like trails. Where could they be in terms of sustainability?

Eric Duthie: Town Council makes the final decision. We are seeking partnerships, not maintenance or financial help. Expanding bike loops would mean more responsibility for others outside town. Tusayan's goal is trails in Tusayan and connector trails.

Dan Gunn: Feasibility has you considering the Town's General Plan and five or six gatekeepers behind whom are rules and regulations. We must consider:

1. What does the public want?
2. Compliance with internal rules and regulations of each Agency.

Jan Balsom: The Town is trying to create an experience that will connect and making sure these connections are reasonable. There is an opportunity to make certain the connections match experience and availability with what the Park has to offer.

Eric Duthie: From the Town's standpoint, we don't want to operate in a vacuum. We want inclusion. Now is the opportunity and the opportune time for the Town to get your ideas. We are giving the opportunity to connect and explore.

Julie Aldaz: Our business's (Red Feather Lodge) owners think trails are a good idea. However, they believe finishing the Ball Park and landscaping in Tusayan comes first. They like the idea of the trails.

Andrew Aldaz: Maintaining and sustaining is the important part. Sustainability is the key.

Sirena Dufault: She will be scoping in September, surveying, looking for opportunities for trails. Phase I – Mapping and Planning – should be complete by the end of 2017.

Eric Duthie: The Town would like to move forward and have something constructed and in place by December 31, 2018. The timeline has some fluidity, but the project will keep moving.

Sirena Dufault: Phase II contains several phases. We should build first what's most important.

Ted Riley: Appreciates the word "intentional." The whole purpose is the intentional use of ground in an amazing place.

Kyle Gifford: People need something to do around visits to the Park, like after dinner. To have something to draw people away from the road – exercise trails incorporated with walking/hiking/biking trails – would be helpful. There are over 200 employees in Tusayan also looking for something to do.

Susan Kerley: The experiences provided by the trails would be important to observers as well as participants. The vibrancy of the community would increase and would be evident in residents' and tourists' participation in various outdoor activities.

Dan Gunn: Maybe we should consider not three large things but eight small things. Maybe a community gathering spot with a bandshell, farmers' market, etc., that would provide a wealth of different experiences that would get people out. How do you get public input from visitors?

Sirena Dufault: In the Grand Canyon News, flyers in businesses, Public Meetings, talking to concierge services, tour guides, etc.

Andrew Aldaz: Do the goals match what people really want? The survey done by the School listed what they would like to see.

Dan Gunn: Two goals identified by the Forest Service include:

Driving for Pleasure

Natural Experiences

Shuttle Bus drivers would be good resources for knowing what visitors would like.

- **Next Steps**

In early September after the meetings and scoping results are gathered, feedback on survey results and mapping will be invited.

Kendall Cikanek suggested that AZ Trail may be seen as one process that we can wrap our minds around easily. He sees as another process the integration of the Tusayan piece. The Forest Service would have to go through the same processes as they did with the AZ Trail.

Dan Gunn asked if it could be one process with two main objectives: Align the AZ Trail and Access to the Trail.

Next week, there are meetings in Kanab and Flagstaff on the AZ Trail.

Eric Duthie said the Town is going build it and wants to do it right. He thanked everyone for their support.

Exhibit IV: Public Comment on the Master Plan - March 21st to May 7th

Jan Balsom, Grand Canyon National Park

The park supports this effort. We appreciate the integration of both NPS and FS standards and objective and the overall recreational goals. You've done a great job.

Kevin Dahl, National Parks Conservation Association

I attended the public workshop and have looked over the plan, which I endorse without any hesitation. It is forward thinking that Tusayan is investing in enhancing the visitor experience. As a frequent visitor myself, I hope to someday hike all the trails that are being proposed, especially the loops to the east and the History trail. Thank you for doing this.

Clarinda Vail, John Thurston, Bess Foster, Bonnie Thurston Trust, Fireside Ridge

It is a great improvement from what had been thrown in, last minute, to the Tusayan General Plan.

On the Acknowledgements page it says Clarinda Vail is part of the working group. She happily met with Sirena as a stakeholder, but is no official consultant to this plan.

We would like to communicate very clearly to the Town, as we have in the past, that before any trails can be located on any of our property, we would require liability coverage with the right to revoke, move, the actual location/surface/width to be determined an agreed-upon by us and Recreational Use Easement from the Town that protects us as required under A.R.S. § 33-1551 that requires certificates of insurance from the Town. In addition, we would want it to cover maintenance requirements, use limitations, and events that result in revocation or termination of the easement. Survey is mentioned throughout the document which we have taken in the broader context as we think no actual land surveys have taken place yet? Is that correct?

Any agreements, and the pertaining paperwork would have to be completed before **ANY ACTIVITY AT ALL** may occur on our property. Other improvements, on our property, we have been waiting for years for the paperwork to be completed. This doesn't build strong/good faith for entering into anything more with the town.

The towns maintenance of things such as the ADOT landscaping/sidewalk snow removal and the sports complex is not good. Seeing the current maintenance items, under the towns control, being properly/well maintained would help build confidence that the town can handle a trails system yet. Adding to and taking care of the school sports complex was a priority for the town a bit ago. It remains what we think should be THE #1 funding priority to better town's residents lives, both young and old. Trails to it are important, eventually, and feel a priority order for the trails should come from this plan. Trails that are closer to the current developed areas in Tusayan should be a priority over the others.

Patrick Kell, International Mountain Biking Association

Please accept this comment letter from the International Mountain Bicycling Association (IMBA) regarding the planning process in Tusayan, AZ. Founded in 1988, IMBA is a non-profit 501(c)(3) educational association, working to unify the national and worldwide mountain bicycling community. Today our network includes 35,000 individual and family members, more than 400 chapters and clubs, and more than 1,000 corporate and retail supporters. We strive to bring a network of recreationists together to protect public lands and the places we ride through education and resource stewardship. We work with advocates to protect public lands and access close to their hometowns, and with state and federal land managers to protect backcountry landscapes. Our work appeals to a broad spectrum of decision makers and elected officials due to the tangible outcomes of protecting public lands--they recognize the power of the recreation economy and the ability of mountain biking to connect people to the land. Along with the recreation values, our work complements rural planning efforts.

We understand that the Master Plan for the Tusayan area consists of approximately 11.5 miles of new non-motorized, multi-use trails for visitors and residents alike. Of these, 8.8 miles will be natural surface singletrack, 1.8 miles will be four-foot wide, crushed gravel path and 0.8 miles will be ADA accessible. We also understand that the the Master Plan objectives were arrived at through a combination of the town's objectives from the 2024 plan and stakeholder and public feedback during the scoping process, with those objectives including:

- Develop a non-motorized multi-use trail system providing safe and sustainable recreational trail routes for visitors and residents
- Identify commuter trail routes for residents
- Highlight the natural beauty of the Tusayan area
- Include opportunities for signage interpreting the natural features of the area
- Provide connectivity with existing trails
- Develop the Grand Canyon History Trail – an interpretive trail about the human history of the Grand Canyon area.
- Provide the Town of Tusayan, Kaibab National Forest and landowners with a summary of potential trail alignments and construction notes as well as preliminary construction cost estimates and notes on the National Environmental Policy Act (NEPA) process

Given the progress to date with this project, we wish to offer our full support of these objectives as listed. We feel that the town of Tusayan is a great place to develop trails, given the proximity to Grand Canyon National Park and Interstate 40 and we support Trails Inspire, Kaibab National Forest and local officials in this endeavor. Please let me know if you have any questions.

Greg Brush, Tusayan Fire District

I think the connectors looks great, and I especially like the layout of the short/big loops. I'm chomping at the bit to take my bike out!!

Tom Da Paolo, Stilo Development Group USA

Thank you for the opportunity to comment upon the Tusayan Trails Master Plan. Stilo Development Group USA is very supportive of most forms of inter-modal transportation that enhance the visitor experience by providing hiking and biking trails, mass-transit and other alternatives that reduce automobile congestion and do not degrade the natural resources of the area.

While scheduling conflicts precluded our attendance at public meetings, we did have the opportunity to meet in person with the Trail Facilitator, Sierra Dufault, early in the process to offer input.

Our primary comment to the proposed trail plan and maps as indicated within the Master Plan dated March 20, 2018 concern the proposed location of the Grand Canyon History Trail as indicated on Pages 9 and 10 of the report as depicted here. While we do not profess to have expertise in either trail design nor its subsequent management, we do believe we have an historical knowledge that may be useful during the Environmental Analysis of the overall trail system as proposed.

For a period of six-years from 1994-1999, the National Forest and Park Services collaborated upon an Environmental Impact Statement for Tusayan Growth and issued a favorable Record of Decision approving the contemplated action on August 6, 1999.

The analysis, in large part was predicated upon two large planning studies: The 1987 Kaibab National Forest Plan and the 1995 Grand Canyon National Park General Management Plan. Visitation to Grand Canyon National Park was slightly over 4,000,000 annual visitors—a mere two-thirds of those who visited the Park in 2017. Visitation through March of 2018 (the most recent figure available) indicate that visitation is up again an astounding 14.03%.

One of the most important components of the Tusayan Growth analysis and conclusion was the decision to construct a large staging area outside the Park boundary whereby all vehicles (other than those used for overnight stays in the Park) would be staged in an area between the south side of North Long Jim Road and to the north of the Imax Theater in Tusayan as depicted here (Tusayan Growth EIS, pg.10).

Some form of mass transportation (shuttle, light-rail, etc.) would than transfer visitors from the staging area to the Park. The corridor for the transportation followed the northerly portion of North Long Jim Road and merged with the old, disturbed road that went into the Park prior to the construction of Highway 64. An approximately 5,000 vehicle staging area was planned along each side of North Long Jim Road.

And therein lies the concern.

The EIS cooperating Agencies (that, beside the NPS and USFS, included the Northern Arizona Council of Governments and Coconino County) initially considered 19 Alternatives and 4 locations in the general vicinity of Tusayan and the Grand Canyon Airport and concluded that the selected site was superior for a variety of environmental, economic, cultural and visitor experience considerations. While the full plan was not implemented, the NPS has constructed and operates a smaller staging area in the general location of the previously contemplated larger facility.

Unconfirmed reports have alluded to the possibility of reconsidering a plan for a much larger staging area in Tusayan and presumably, a current study could reach the same conclusion as to the most suitable location for it will be the area currently selected for the Grand Canyon History Trail.

Another aspect of the study that seems somewhat at odds with the proposed location of the Grand Canyon History trail is the lack of connectivity to either the Big and Short Loop trails or the larger Arizona Trail.

The History Trail is also far removed from the hotels in Tusayan which presumably represent the primary source of hikers that will likely use the trails to begin with and the trailhead

indicated at Highway 64 and FS 302 would seem to be an ideal opportunity to familiarize a guest with three options for hiking from a single point of departure.

The Town of Tusayan has made an application with the USFS for access to properties it owns at the Kotzin and TenX ranches and while the NEPA analysis for the access is temporarily on hold, it is expected to resume with the next 30-60 days. Several of the public comments offered during the scoping period for the access suggested alternatives of a land exchange in lieu of access and the most suitable location for a land exchange, if any, was determined be the Tusayan Growth EIS to be where the planned Grand Canyon History Trail is suggested in the Trails report.

Should either Tusayan desire future growth or the NPS elect to expand its existing staging area—or both, a trail system in that area complicates either option from implementation when it appears there are better trail options to be considered.

It has been said that the USFS is reluctant to connect either of the Loop Trails to the developed area of Tusayan due to their concern of fire threats from activity at nearby hotels. This is curious for several reasons: the more significant Arizona Trail comes within feet of the very area the USFS believes needs to be avoided and, carelessness can occur on any trail in any location.

We are looking forward to the NEPA analysis that will consider a variety of alternatives such as those mentioned herein and evaluate the impacts of various locations for these trails.

Thank you for the opportunity to comment upon the Tusayan Community Trails Master Plan.

Haley Johnson, Pink Jeep Tours

I fully support the incorporation of a healthy activity lifestyle trails systems and an Interpretive handicap accessible trail system. I believe this plan will support local recreation and activities as well as the same for tourists.

I'd love to see a viewing platform for astronomers as well but I highly recommend against it being paved to create a level viewing area.

Astronomers don't need a man-made viewing platform. We are perfectly fine using a sectioned off piece of land in a suitable area. Perhaps a small sign or small Interpretive marker could designate an area for night sky viewing.

On a different note...how will night sky viewers be able to view the night sky if Tusayan builds more lighting.

I, as a Tusayan resident and Grand canyon hiking guide, fully support this trails system.

Though I am entirely against building any more buildings in conjunction with this project or street lights to light the pathways, that is an absolute NO. NO more lights!!

Frank Insana, Pink Jeep Tours

At the Tusayan Trails Meeting on March 28th it was said that there was consideration of a telescope platform made of cement that would be built to show the night sky, so to not be destructive to the environment and to get less light pollution why not have the sight built in a quarry, there are a few of those in the surrounding area, they are already disturbed sights and have slopes that can protect against light pollution. Also Tusayan needs to cut down the light pollution tremendously for the sake of looking at the natural beauty of the night sky more clearly, for the health of the residents and visitors, the animals and the environment, and to conserve energy, in other words there are too many bright lights in Tusayan and too many lights in general, its a sore eye on dark sky / light pollution maps. If Tusayan and the Grand Canyon National Park could cut down on the light pollution even further to the point that the south rim area would possibly become a Bortle 1, meaning zero light pollution, that would be ground breaking. Also Tusayan needs to build a wooden platform made from smaller younger pines that would have been thinned out of an area nearby anyways for natural forest restoration which would be less damaging to the soil and ground, instead of a cement slab that constantly sucks up oxygen and releases carbon dioxide.

It was said at the meeting that there would be no damage to plants but how can that be when building and maintaining trails? We need to just turn all the surrounding forest service roads in the Tusayan area into trails with no motorized access. That's what many of trails we hike on in Arizona were in the past, former roads for motorized vehicles. Also turning existing heavily used social trails into official ones so that there would be no damage to the surrounding plants, instead of paving a new one, would certainly be far more environmentally friendly, especially if choosing the ones that could cause the least amount of erosion and least need of maintenance.

Also at the meeting there was talk about interpretive signs on natural features of the area like the plants, and that would be great, but we should also have a larger focus on conservation/environmental issues in the area, such as how the uranium mines in the Kaibab National Forest and in other areas surrounding the Grand Canyon could contaminate the water table and soils, and dry up many springs and seeps, plus other conservation subjects like overgrazing of cattle, the need for the reintroduction of grey wolves to more properly maintain the elk and deer herds, condors still getting ill and dying of lead poisoning thanks to many hunters not using other bullets like copper, the lack of water in the area for the future growth of the town of Tusayan and how that could affect the Havasupai Tribe and their wondrous waterfalls along with countless species of animals and plants in the area that depend on the springs and seeps in the Grand Canyon if more drilling for water was implemented, the affects of the noise pollution from air tours flying over the canyon on wildlife and visitors, etc...

Craig Sanderson, Mayor of Tusayan

From Canyon Pines/Fireside Ridge, use road to Sports Complex, the Town would work with the sanitary district to build sidewalk here.

Appendix I: Health and Economic Benefits of Trails

The following studies show the health and economic benefits of trails and recreation:

American Hiking Society - *The Economic Benefits of Trails*

<http://atfiles.org/files/pdf/econAHS.pdf>

Active Living Research - *The Economic Benefits of Open Space, Recreation Facilities and Walkable Community Design*

<http://atfiles.org/files/pdf/Economic-Benefits-Active.pdf>

Urban Land Institute - *10 Principles for Building Healthy Places*

<http://atfiles.org/files/pdf/10-Principles-for-Building-Healthy-Places.pdf>